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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,409	07/18/2003	Takaaki Tsuboi	TSUBOI7	2781

1444 7590 11/17/2004

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EXAMINER

JONES, JUDSON

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,409

Applicant(s)

TSUBOI ET AL.

Examiner

Judson H. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 6-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 071803.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities: there is no antecedent basis for the limit sensor and the before-the-origin sensor. Those elements are in claim 9 but claim 12 only depends on claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright 5,208,501 A in view of Takei 5,684,344 A. Wright discloses a position control stage comprising a bed 55, a turntable 11, rolling contact bearings, a linear motor with armature windings as described in column 3 lines 35-41 and an encoder as described in column 2 lines 16-18. In figures 5 and 6 Wright discloses flat magnets 56 underneath the turntable but does not disclose the type of windings used. Takei teaches flat coils opposing flat magnets in figures 2 and 7. Since Takei and Wright are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized flat coils to oppose the flat magnets of Wright in order to take maximize the power output and efficiency of the motor.

In regard to claim 2, see Takei figures 2 and 7.

In regard to claim 5, see Wright figure 5. The armature windings over a pre-selected area of the disc surface of the bed is viewed as being the entire disc surface.

Allowable Subject Matter

Claims 3, 4 and 6-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, provided the objection to claim 12 is overcome.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not disclose or teach a minimum unit of three armature windings and five field magnets in combination with the other features of claim 3. The prior art of record does not disclose or teach field magnets fitted into circular recesses cut in the underside of the turntable and armature windings on coil supports fitted into circular recesses in combination with the other features of claim 6. The prior art of record does not disclose or teach an optical linear scale surrounding a periphery of a turntable in combination with the other features of claim 7. The prior art of record does not disclose or teach a position control stage having a stopper below a turntable, another stopper above a turntable, a before the origin sensor and a limit sensor in combination with the other features of claim 9. The prior art of record does not disclose or teach a position control stage having a turntable with an opening in the center thereof in combination with the other features of claim 10. The prior art of record does not disclose or teach a position control stage having roller contact bearings abutted at an inner ring thereof against a circular shoulder and abutted at an outer ring thereof against another circular shoulder in combination with the other features of claim 11. The prior art of record does not disclose or teach a position

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control stage having a limit sensor, a before the origin sensor and sensor lines clumped together through a cord cover in combination with the other features of claim 12.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cole 4,430,802 A discloses an optical transmitter and receiver for a turntable in column 8 lines 30-34 but does not disclose a scale on the outer periphery of the turntable. Chitayat 5,936,319 A teaches a minimum of 5 motor magnets and 4 windings for a three phase system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H. Jones whose telephone number is 571-272-2025. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JHJ 11/9/2004



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